

LEAD MODEL DEVELOPMENT:
PROBABILISTIC RISK ASSESSMENT AND BIOKINETIC MODELING
June 14-17, 1999

MONDAY, JUNE 14, 1999

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| 8:00-9:00 | REGISTRATION | |
| 9:00-9:15 | WELCOME AND INTRODUCTIONS: Les Grant | |
| 9:15-9:45 | KEYNOTE ADDRESS: Les Grant | |
| SESSION 1: GENERAL ASPECTS OF LEAD MODEL DESIGN: Les Grant, Chair | | |
| TIME | SPEAKER | TOPIC |
| 9:45-10:15 | Mark Maddaloni, EPA Region 2 | Description of EPA’s Adult Pb Model and comparison with other biokinetic Pb models |
| 10:15-10:30 | BREAK | |
| 10:30-11:15 | Ellen O’Flaherty, University of Cincinnati: Retired | Description of the structure of the O’Flaherty model |
| 11:15-11:50 | Joel Pounds, Wayne State University | Structure and Application of the Leggett Model to Contemporary Issues of Lead Toxicity in Adults |
| 11:50-12:30 | Rob Elias, EPA/ORD/NCEA/RTP | Description of the biokinetic structure of the IEUBK model |
| 12:30-1:30 | LUNCH | |
| SESSION 2: KEY PHYSIOLOGICAL PROCESSES: Les Grant, Chair | | |
| 1:30-2:15 | Paul Mushak, PB Associates | Physiological processes underlying blood lead biokinetics |
| 2:15-2:45 | Howard Hu, Harvard University | The influence of bone lead and erythrocyte lead on plasma lead |
| 2:45-3:00 | BREAK | |

| TIME | SPEAKER | TOPIC |
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| 3:00-3:45 | William Manton, U Texas, Dallas | A critical review of the measurement of lead in plasma |
| 3:45-4:15 | Gerry Henningsen, EPA Region 8 | Lead saturation: GI tract absorption or circulatory system? |
| 4:15-5:00 | Panel Discussion | Panelists: Session I and II speakers |

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| TUESDAY JUNE 15, 1999 | | |
| SESSION 3: RECENT ADVANCES IN PHARMACOKINETIC AND OTHER PHYSIOLOGICAL STUDIES: Mark Johnson, Chair | | |
| TIME | SPEAKER | TOPIC |
| 8:30-9:00 | Kate Mahaffey, EPA NCEA/WASH | Mobilization of lead from bone stores |
| 9:00-9:30 | Anne Steenhout, Free University of Brussels | Calcium interactions in the tooth lead model |
| 9:30-10:00 | Mary Ballew, EPA Region 1 | Modeling growth and development |
| 10:00-10:15 | BREAK | |
| 10:15-10:45 | Stan Casteel Veterinary Medical Diagnostic Lab, U Missouri, Columbia, and Gerry Henningsen EPA Region 8 | Maternal to fetal transfer in young swine |
| 10:45-11:15 | Don Smith, University of California | |
| 11:15-11:45 | Panel Discussion | Panelists: Session III speakers plus Paul Mushak, Ellen O'Flaherty |
| 11:45-1:00 | LUNCH | |
| SESSION 4: MATHEMATICAL CONCEPTS OF BIOKINETIC MODELING: Gary Diamond, Chair | | |
| TIME | SPEAKER | TOPIC |
| 1:00-1:30 | Marlin Mickle, University of Pittsburgh | An all ages dynamic and stochastic lead model |
| 1:30-2:00 | Edmond Crouch, Cambridge Environmental | Mathematics of biokinetic modeling |
| 2:00-2:30 | Steve Rust, Battelle/Columbus | Mathematics of the IEUBK Model |

| TIME | SPEAKER | TOPIC |
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| 2:30-3:00 | Allan Marcus and Rob Elias, EPA/ORD/NCEA/RTP | Elements of model confidence |
| 3:00-3:15 | BREAK | |
| 3:15-3:45 | Larry Zaragoza, EPA/OERR | Model development design and process |
| 3:45-4:30 | Panel Discussion | Panelists: Session 4 Speakers and Harlal Choudhury |

| WEDNESDAY JUNE 16, 1999 | | |
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| SESSION 5: RECENT ADVANCES IN DEVELOPMENT AND APPLICATION OF LEAD MODELS: Marc Stifelman, Chair | | |
| TIME | SPEAKER | TOPIC |
| 8:30-9:00 | Barbara Beck, Gradient | Recent developments in a stochastic physiologically based pharmacokinetic model for lead model |
| 9:00-9:30 | Ed Stanek, U Mass/Amherst | Soil Ingestion |
| 9:30-10:00 | Scott Bartell, University of Washington | Modeling soil ingestion rates |
| 10:00-10:15 | BREAK | |
| 10:15-10:45 | Jaana Sorvari, EPPD, Helsinki, Finland | Modeling requirements for risk assessment in Finland |
| 10:45-11:15 | Kiran Srinivasan, URS Greiner - Woodward Clyde, and Dana Shepherd, CK Associates | Case study on the application of the Adult Lead Model |
| 11:15-11:45 | Emelia Niciu, Institute of Public Health Bucharest, Romania | Reducing blood lead in 1-6 year old children living in the Zlatna Area, Romania |
| 11:45-1:00 | LUNCH | |
| 1:00-1:30 | Scott Everett, Utah DEQ | Sampling issues of lead modeling |
| 1:30-2:30 | Panel Discussion | Panelists: Session 5 Speakers plus Gerry Henningsen, Mark Maddaloni, and Pat Van Leeuwen |
| 2:30-3:00 | Rob Elias, Moderator | Future directions/research needs discussion |

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| THURSDAY JUNE 17, 1999 | | |
| SESSION 6: APPROACHES TO PROBABILISTIC RISK ASSESSMENT REVIEW: Larry Zaragoza, Chair | | |
| TIME | SPEAKER | TOPIC |
| 8:30-9:00 | Karen Hogan, EPA/ORD/NCEA/WASH | Analyzing uncertainty |
| 9:00-9:30 | Stephanie Simstad, Ohio EPA | Making the transition from deterministic to probabilistic lead models: a re-evaluation of model parameters |
| 9:30-10:00 | Susan Griffin, EPA Reg 8 | Development of Risk Assessment Guidance for Superfund (RAGS) Volume 3 |
| 10:00-10:30 | John Kissel, U Wash | PRA for soil ingestion rates |
| 10:30-10:45 | BREAK | |
| 10:45-11:15 | Phil Goodrum, SRC | ISE Model: Development and application issues |
| 11:15-11:45 | Terri Bowers, Gradient | Comparison of various models for calculation of permissible exposure levels for protection of children: implications of differences in pharmacokinetic modules and use of deterministic vs probabilistic models |
| 11:45-12:45 | LUNCH | |
| 12:45-1:15 | Gary Diamond, SRC | Use of spatially-weighted distributions to represent uncertainty in mean soil lead concentrations |
| 1:15-1:45 | Ron Whitfield, Argonne National Lab | Using expert judgements to estimate health risks of lead exposure |
| 1:45-2:45 | Panel Discussion: Les Grant, Moderator | Panelists: Session 6 Speakers plus Larry Zaragoza |
| 2:45-3:15 | Closing Remarks: Les Grant | |